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PATENT TRADEMARK OFFICE

Docket No.: 3153/1F534US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Stephen QUAKE and Hou-Pu CHOU

Serial No.: 09/826,373 Art Unit: 1743

Confirmation No.: 2878

Filed: April 4, 2001 Examiner: Not yet assigned

For: METHODS AND SYSTEMS OF MOLECULAR FINGERPRINTING

INFORMATION DISCLOSURE STATEMENT

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Hon. Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

In order to comply with the duty of disclosure set forth in 37 CFR 1.56, applicants submit herewith an Information Disclosure Statement in accordance with 37 CFR 1.97 and 1.98. In particular, applicants submit herewith Form PTO-1449 listing references for consideration by the Examiner. Copies of the references cited therein are also submitted herewith.

In accordance with 37 CFR 1.97(b)(3), it is believed that this Information Disclosure Statement is submitted before the mailing of any office actions on the merits for this application. Therefore it is believed that no fee is required for this submission. However, should the US Patent and Trademark Office determine that a fee is required, the Commissioner is hereby authorized and requested to charge the required fee(s) to Deposit Account No. 04-0100.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing Form PTO-1449 next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Information Disclosure Statement is being submitted in compliance with 37 CFR 1.56, but the citation of such document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of

examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed. Early and favorable consideration is earnestly requested.

Respectfully submitted,

Dated: October 1, 2001

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Agent for Applicant(s)

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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE (REV. 7-80)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 3153/1F534 US1 SERIAL NO: 09/826,373

APPLICANT: Stephen QUAKE ET AL. FILING DATE: April 4, 2001

U.S. PATENT DOCUMENTS

*EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	1. 4,581,624	04/08/86	O'Connor, J.M.	357	26	03/01/84
	2. 4,585,209	04/29/86	Aine, H.E. et al.	251	129	10/27/83
	3. 5,271,274	12/21/93	van Lintel, H.T.G.	73	597	08/14/91
	4. 5,417,235	05/23/95	Wise et al.	137	1	07/28/93
	5. 5,452,878	09/26/95	Gravesen et al.	251	129.02	12/14/93
	6. 5,800,690	08/01/98	Chow et al.	204	451	07/03/96
	7. 5,948,227	09/07/99	Dubrow	204	455	12/17/97
	8. 5,965,001	10/12/99	Chow et al.	204	600	07/03/97
	9. 6,042,709	03/28/00	Parce et al.	204	453	11/24/98
	10. 6,007,690	12/28/99	Nelson et al.	204	601	07/30/97

FOREIGN PATENT DOCUMENTS

*EXAMINER INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO
✓	11. GB 2,264,296	08/25/93	Great Britain	C04B	35/82	Yes	
✓	12. WO 98/52691	11/26/98	PCT	B01L	3/00	Yes	

OTHER REFERENCES
(INCLUDING AUTHOR, TITLE DATE, PERTINENT PAGES, ETC.)

*EXAMINER INITIALS

13. Angell, et al., "Silicon Micromechanical Devices," *Scientific American*, April 1983, 248: pages 44-55 ✓

OIPE JC183 OCT 03 2001 PATENT & TRADEMARK OFFICE

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE (REV. 7-80)

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DOCKET NO.: 3153/1F534 US1 SERIAL NO: 09/826,373

APPLICANT: Stephen QUAKE ET AL. FILING DATE: April 4, 2001

*EXAMINER INITIALS

14. A. Ashkin et al. "Optical trapping and manipulation of single cells using infrared laser beams," *Nature*, December 1987, Vol. 330 24/31, pages 769-771

15. A. Ashkin et al., "Optical Trapping and Manipulation of Viruses and Bacteria," *Science*, March 20, 1987, Vol. 235, pages 1518-1520

16. J. P. Brody, et al., "Low Reynolds number micro- fluidic devices," *In Proc. of Solid-State Sensor and Actuator Workshop*, June 1996, pages 105-108

17. Budowle et al., "Analysis of the VNTR Locus DIS80 by the PCR Followed by High-Resolution PAGE," *Am. J. Hum. Gent.*, 1991, Vol. 48, pages 137-144

18. Castro, A., et al., "Fluorescence Detection and Size Measurement of Single DNA Molecules," *Analytical Chemistry*, April 1, 1993, Vol. 65, pages 849-852

19. Hou-Pu Chou, et al., "A microfabricated device for sizing and sorting DNA molecules," *PNAS*, Jan.1999, Vol. 96, pages 11-13

20. Thesis by Chou, H., "Microfabricated Devices for Rapid DNA Diagnostics," California Institute of Technology, May 30, 2000

21. S. Fiedler, et al., "Dielectrophoretic Sorting of Particles and Cells in a Microsystem," *Analytical Chemistry*, May, 1, 1998, Vol. 70, pages 1909-1915

22. M. J. Fulwyer, "Electronic Separation of Biological Cells by Volume," *Science*, 1974, Vol. 156, pages 910-911

23. Giusti, et al., "Application of Deoxyribonucleic Acid (DNA) Polymorphisms to the Analysis of DNA Recovered from Sperm," *Journal Forensic Sciences*, 1986, Vol. 31, pages 409-417

24. Goodwin, P.M., et al., "Rapid sizing of individual fluorescently stained DNA fragments by flow cytometry," *Nucleic Acids Research*, 1993, Vol. 21, No. 4, pp. 803-806

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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE (REV. 7-80)

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DOCKET NO.: 3153/1F534 US1 SERIAL NO: 09/826,373

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*EXAMINER INITIALS

25. D.J. Harrison, et al., "Micromachining a Miniaturized Capillary Electrophoresis-Based Chemical Analysis System on a Chip," *Science*, Aug. 13, 1993, Vol. 26, pages 895-897

26. Jeffreys et al., "Hypervariable 'minisatellite' regions in human DNA," *Nature*, March 7, 1985, Vol. 314, pages 67-72

27. Kanter et al., "Analysis of Restriction Fragment Length Polymorphisms in Deoxyribonucleic Acid (DNA) Recovered from Dried from Dried Bloodstains," *Journal of Forensic Sciences*, April 1986, Vol. 31, No. 2, pages 389-408

28. M. U. Kopp, et al., "Chemical amplification: Continuous-flow PCR on a chip," *Science*, May 15, 1998, Vol. 280 (5366), pages 1046-1048

29. Paul C. H. Li et al., "Transport, Manipulation, and Reaction of Biological Cells On-Chip Using Electrokinetic Effects," *Analytical Chemistry*, Vol. 69, No. 8, pages 1564-1568April 15, 1997.

30. Manz et al., "Micromachining of monocrystalline silicon and glass for chemical analysis systems," *Trends in Analytical Chemistry*, 1991, Vol. 10, pages 144-149

31. Nakamura et al., "Variable Number of Tandem Repeat (VNTR) Markers for Human Gene Mapping," *Science*, March 27, 1987, Vol. 235, pages 1616-22

32. J. P. Nolan, et al., "The emergence of flow cytometry for sensitive, real-time measurements of molecular interactions," *Nature Biotechnology*, July, 1998, Vol. 16, pages 633-638

33. L.A. Sklar, "Sample handling for kinetics and molecular assembly in flow cytometry," *SPIE*, 1998, Vol. 3256, pages 144-153

34. Thompson, L.F., "Introduction to Micro Lithography," *ACS Symposium Series*, 1983, Vol. 219. pages 1-13

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OCT 03 2001
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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE (REV. 7-80)

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DOCKET NO.: 3153/1F534 US1 SERIAL NO: 09/826,373

APPLICANT: Stephen QUAKE ET AL. FILING DATE: April 4, 2001

*EXAMINER INITIALS

35. M.A. Van Dilla et al., "Cell Microfluorometry: A Method for Rapid Fluorescence Measurement," *Science*, 1969, Vol. 163, pages 1213-1214

36. G. Whitesides, Y. Xia, "Soft Lithography," *Angewandte Chemie International Edition* 37, 1998, Vol. 37, pages 550-575

EXAMINER: _____ DATE CONSIDERED: _____

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.